STATE OF MONTANA
SECRETARY OF STATE'S OFFICE
JOB PROFILE AND EVALUATION

SECTION I - Identification

Working Title: Computer Programmer

Agency: Secretary of State

Class Code Number: 151215

Division/ Bureau: Administrative Rules and Management Services

Class Code Title: Computer Programmer

Section/ Unit: Technology Services

Pay Band: 5

Work Address:
1236 – 6th Ave.
Helena, MT 59601

Position Number: 66012

Phone:

☐ FLSA Exempt

☒ FLSA Non-Exempt

Profile Completed By:
Mark Van Alstyne

Work Phone:
444-4243

Work Unit Mission Statement or Functional Description:
The Secretary of State is one of six executive branch officers originally designated by the Montana Constitution of 1889. The duties of the secretary of state include: interpreting state election laws and overseeing elections; maintaining the official records of the executive branch and the acts of the legislature; reviewing, maintaining, and distributing public-interest records of businesses and nonprofit organizations; filing, publishing, and maintaining administrative rules adopted by state departments, boards and agencies; attesting to the governor's signature on executive orders, proclamations, resolutions, extradition papers, and appointments; preserving the state seal; filing and maintaining records of secured financial transactions, such as liens; serving on the state Board of Land Commissioners and the Board of Examiners; and commissioning notaries public. The Secretary of State's Office is divided into four Divisions: Elections, Business Services, Management Services and Administrative Rules, and Records Management.

The Information Technology function provides agency IT support for local area network computer and software systems. This involves developing and maintaining all computer systems and connections; acquiring, modifying, configuring, installing and repairing as needed hardware and software; providing responsive and reliable daily operational support including location, diagnosis, and correction of operational errors; acquiring and replacing obsolete data processing equipment including training users; promoting a compatible data processing system that meets the needs of SOS and development and maintenance of the agency web site.

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Describe the Job's Overall Purpose:
This position serves as the agency computer programmer responsible for maintaining in-house software applications. The work involves Programming, Testing and Implementation (50%), Analysis and Design (25%), User Support and Technical Assistance (15%), and Network Administration duties (10%). The position reports directly to the Information Technology Manager, and does not directly supervise other agency personnel.

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SECTION II - Major Duties or Responsibilities   ***% of Time***

A.   <u>**Programming, Testing, and Implementation**</u>   <u>**50%**</u>

Evaluates technical specifications and performs or directs the programming, testing, and implementation needed to move new or modified systems into production. This includes designing system applications to meet user needs and ensure efficient use of agency resources and compliance with agency information system guidelines. This position is responsible for the design of systems with complex external and internal interfaces; large numbers of data elements (e.g., files and applications); varied and numerous users; a large volume of data; a number of hardware platforms and software systems; and those critical to agency operations.

1. Develops program specifications and modifications by reviewing overall technical specifications and design objectives. Determines system detail changes (e.g., program codes and system maps); specifies which programs, screens, and tables need to be changed or developed. Evaluates current standards (e.g., naming conventions) for files, tables, screens; coordinates with other IT experts; reviews current system documentation; and applies advanced utility programs to determine what needs to be changed.

2. Prioritizes and develops application program writing and implementation sequences, monitors and resolves in-progress problems, and provides periodic time and cost updates to end-user representatives and members of the project team. This involves assessing and determining changes in project plans; anticipating and resolving potential project problems and impediments; designing efficient schedules to sequence project phases, deadlines, and milestones; and apprising users and information systems specialists of project progress, design features, and new options and alternatives related to system development.

3. Design programs by determining the proper language and required command files, and identifying how modules interact with each other (data block interfaces, etc.). Code programs by translating design specifications into computer language programs and command files using knowledge of computer programming languages, system capabilities, and network requirements. Finalize data elements used by the system and associated existence constraints. This involves designing files using descriptions of all information elements and the definitions of the files; defining data stores and/or database definitions; and designing detailed record formats and record relationships.

4. Performs unit, integration, and system testing to ensure that all applications function properly. Performs unit testing to ensure that changes in portions of a program do not affect current production capabilities; performs integration testing to ensure that programs function properly when multiple programs are integrated into the new system; and performs system testing when all intended changes have been made to ensure that the system as a whole

functions as required, then the program is released to users for testing. Responds to reports of problems encountered by users and makes necessary changes to ensure system functions as anticipated.

5. Writes change requests to move programs into production environment after user approval. This involves determining potential impacts on other applications, assessing time and resource requirements, coordinating with user community to minimize disruption of business process, coordinating any database changes and conversions, and ensuring that no one is using the system during program installation. Test module is moved into production when testing is complete.

6. Develops effective and efficient methods of production recovery to ensure that any aspect of program or system failure (e.g., if users can't access data or perform system functions) will be corrected quickly and effectively so that production systems are up and running and available to users.

B.   Analysis and Design   25%

Analyzes business needs and/or legislative mandates to determine agency application development and enhancement needs and priorities.

1. Performs requirement analysis and system definition to plan and develop system enhancement or modification projects and to determine methods of implementing project mandates with limited resources. Identifies project requirements (e.g., costs, staff time, resources, etc.), determines which issues are most critical to project feasibility, and makes recommendations on ways to prioritize and allocate limited resources. Assesses existing system resources and applications to determine what can be used, determines internal and external software and hardware coordination needs, and assesses available external resources.

2. Develops system technical specifications based on information obtained during requirement analysis. Identifies and lays out what needs to be changed in the system and processes, and what further changes will occur as a result; maps out technical requirements (e.g., changes to configuration, maps, screens, programs, files, etc.) and explains proposed system changes to users as well as obtaining user acceptance of the purposed change.

3. Provides technical assistance to users to explain business processes in the new system. This involves studying users' business processes to determine how they will be affected by new applications or enhancements, providing training, and developing and writing system and user documentation.

C.   User Support and Technical Assistance   15%

Develops training practices and approaches to ensure SOS technical staff and users remain current with contemporary IT products and systems. This involves conducting research into new applications and systems and evaluating internal training needs to target efforts and develop training curriculum. Provide technical assistance to system and program users to ensure accessibility of system information and applications.

1. Develops technical documentation to provide accurate and complete information and data related to system design, user training, technical programming, business processes which

may require certain programming, database models and related diagrams, and other system specifications.

2. Conducts training sessions for other programmers in specific areas of expertise to ensure comprehensive advanced training for all programmers.

3. Develops and delivers training programs on new system functions and operations to ensure the proficiency and competency of users. This involves developing training curricula based upon new and modified system operations, assessment of user training needs, new procedures and technologies, and other factors. The incumbent delivers training to user groups and continually provides technical assistance as needed to users.

4. Provides problem resolution and support for agency applications and provides direction on possible resolution. Prioritizes user support based on how critical the application is, the logistics, options to keep the system functioning, and impacts on related systems. Resolves user problems by establishing methods and using diagnostic tools to isolate problems; analyzing hardware and software configurations, network components, and communication issues; and developing solutions to correct problems.

D.   Network Administration   10%

1. Provides backup to the Network Administrator for Novell and Microsoft directory services and Windows server issues.
2. Provides software installation and maintenance for Windows desktop environments.
3. Provides backup to Systems Analysts on Oracle database issues.
4. Provides occasional PC hardware setup and maintenance.

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*2.   **Specific examples of problems solved, decisions made, or procedures followed when performing the most frequent duties of this position include:***

The position regularly resolves problems related to the development, implementation, and maintenance of SOS systems. For example, the position makes decisions regarding the types of modifications, and enhancements that will most effectively streamline and improve SOS business processes based on analysis of user needs and management guidelines. In addition, the position continually resolves user and system problems that occur during system operation. This requires the incumbent to identify and evaluate the nature of problem, determine effective solutions, implement any necessary system or process modifications to resolve problems, and provide technical assistance and training to users to ensure competency.

*3.   **The most complicated aspect of this position is:***

The most complicated part of the job is the analysis and evaluation of SOS business process needs and the innovation of unique solutions. These functions require the position to consider a range of variables related to process requirements, work priorities and objectives, available resources, technological capabilities and limitations, and system-wide integration strategies to ensure the development and effective administration of the various SOS systems.

4.   Guidelines, manuals, or written procedures that support this position include:

General parameters are provided by State information technology standards, SOS operating procedures, and technical system references. The incumbent is expected to modify or recommend alternatives to these parameters as necessary to meet specific SOS objectives. Available manuals include SOS operations manuals, MCA, ARM, and various software and system manuals and technical documentation.

5.   Which of the duties and/or specific tasks listed under 1. (above) are considered "essential functions" that must be performed by this position (with or without accommodations)?
The following duties are considered essential functions because they require specialized expertise and skill and are the primary reasons the job exists:

Application Systems Development
End User Support
Network Systems Support

The following mental and physical demands are associated with these essential functions:

PHYSICAL
- Lifting (less than 50 lbs.)
- Carry light items (papers, books, small parts)
- Remaining seated for extended periods of time, with occasional walking; standing; bending
- Travel within the state to project locations, and out of state travel by airline to national conferences and meetings.
- Operating a personal computer
- Communicate in writing, in person, and over the phone

MENTAL
- Deal with customers on a regular basis
- Ability to multi-task
- Demands for accuracy in all aspects of work
- Ability to meet inflexible deadlines
- Computing arithmetic operations
- Comparing data
- Compiling information
- Analyzing, Synthesizing
- Coordinating
- Negotiating
- Instructing

6.   Does this position supervise others?   ☐ **Yes**   ☒ **No**

Number directly supervised:
Complexity level of the positions supervised:
Position Number(s) of those supervised:

7. ***This position is responsible for:***

☐ Hiring ☐ Firing ☐ Supervision ☐ Pay Level
☐ Performance Management ☐ Promotions ☐ Discipline
☐ Other:

8. ***Attach an Organizational Chart.***

ATTACHED

SECTION III - Minimum Qualifications - List minimum requirements for the first day of work.

Critical knowledge and skills required for this position:

KNOWLEDGE:

This position requires extensive knowledge of the concepts and theories of computer science; functional applications; proprietary languages; information systems development, enhancement, and maintenance; systems analysis, design, testing, and documentation techniques and procedures; telecommunications and information systems networking; customer service standards; data management products; data structures and interrelationships. The position also requires knowledge of network capabilities, computer operating systems, equipment, and software; databases; data management tools; and project planning and management.

SKILLS:

This position requires skill in managing complex and varied system development and management projects; isolating and resolving advanced technical problems; project analysis; reading and interpreting technical data reports; operating various office software applications (e.g., Word, Excel, PowerPoint, database applications and platforms, etc); establishing project goals, timelines, and standards; translating technical information to varied audiences; and written and verbal interpersonal communications.

Behaviors required to perform these duties?

- **Verbal Communication:** Keeps appropriate individuals informed. Listens to others respectfully, understands or seeks clarification, and responds appropriately demonstrating tact and diplomacy. Expresses thoughts and ideas clearly.

- **Written Communication:** Writes clearly, logically and effectively using proper style, tone, grammar, spelling and punctuation.

- **Flexible at Work:** Responds positively to changes in direction, priorities, responsibilities, personnel or assignments. Works effectively in a variety of situations and with a variety of individuals or groups.

- **Working with Others:** Relates to others in an open and accepting manner; is approachable. Offers and accepts opinions constructively. Adjusts to how individuals and

the work unit will react. Treats others with respect. Constructively resolves disagreements. Is open to others' ideas and gives credit and recognition to others.

- **Responsive to Work Needs:** Willing to perform different jobs, cross train, or assist wherever needed. Is aware of co-worker workload and responds accordingly.

- **Takes Action:** Takes effective and appropriate action to perform job duties without being reminded. Willingly accepts more responsibility or more work.

- **Forward Looking:**   Suggests improvements and new ideas, technologies, and approaches. Willingly applies new and evolving ideas, methods, designs and technologies to work.

- **Efficiency and Focus:** Uses time effectively and prioritizes tasks. Is aware of workload and makes appropriate adjustments to meet deadlines and complete tasks. Handles interruptions or distractions and stays on task. Achieves goals.

- **Accuracy:** Ensures accuracy of work and makes corrections in a timely manner. Is conscientious and monitors own quality of work.

- **Attendance:** Arrives on time for work and demonstrates good attendance record.

- **Organizational Awareness:** Understands and follows the rules, policies and laws that govern work. Identifies key decision-makers; understands and respects the balance of authority. Acts in an ethical manner.

Education:

Check the <u>one box</u> indicating minimum education requirements for this position for a new employee the first day of work:

☐ No education required   ☒ Related AAS/2-years college/vocational training
☐ High school diploma or equivalent   ☐ Related Bachelor's Degree
☐ 1-year related college/voc. training   ☐ Related Master's degree

Please specify the acceptable and related fields of study: Computer Science

Required/Acceptable:

Related:

Other education, training, certification, or licensing required (specify): None Specified

Experience:

Check the <u>one box</u> indicating minimum work-related experience requirements for this position for a new employee the first day of work:

☐ No prior experience required   ☐ 3 to 4 years
☒ 1 to 2 years   ☐ 5 or more years

Other specific experience (optional):

Alternative Qualifications:

This agency will accept alternative methods of obtaining necessary qualifications.

☒ Yes ☐ No

 Alternative qualifications include*:*

This position requires an Associate's Degree or 2-years college/vocational training in Computer Science, or a combination of education and Information Technology experience equivalent to an Associate's Degree (one year of IT-related experience equals one year education).

SECTION IV – Other Important Job Information

Work is performed in a normal office environment, and the position requires the ability to communicate effectively in person, in writing, and over the phone. Work hours vary in complying with numerous deadlines, customer requests, interruptions and wide fluctuations in work volumes, and deadlines require the employee to be able to work under pressure for long periods of time.

This position is required to travel occasionally in order to troubleshoot or install system software and enhancements, and provide training to staff outside the office.

SECTION V – Signatures

My signature below (typed or hand written) indicates the statements in Section I to IV are accurate and complete.

Employee:

Name: _____   Title:_____

Signature: _____   Date: _____

Immediate Supervisor:

Name: _____   Title:_____

Signature: _____   Date: _____

Deputy:

Name: _____   Title:_____

Signature: _____   Date: _____

Agency Designee:

Name: _____   Title:

Signature: _____   Date: _____